

Claims

1. Diagnostic system for a valve, especially a check valve of a positive displacement pump, with at least one solid-borne sound sensor (20, 21), with a device (22) for evaluation of at least 5 one recorded solid-borne sound signal and with means (25) for determining the valve state, through which it can at least be established whether the valve (8, 9) is in the open or closed state, characterized in that, a first value of a characteristic value (L1) of a sound signal 10 recorded in the closed state of a valve (8) can be determined, essentially simultaneously with this, a second value of a characteristic value (L2) of a sound signal recorded in the open state of the same valve (8) and/or of a valve (9) operated in a comparable environment is determined and that a signal 15 (31) can be output for displaying the fault if the deviation of the first value from the second value exceeds a predetermined threshold value (30).
2. Diagnostic system in accordance with claim 1, characterized in that the first value and the second 20 value can be determined on the basis of the last sound signal recorded in the closed or the open state.
3. Diagnostic system in accordance with one of the claims 1 or 2, characterized in that 25 the valve is a check valve of a positive displacement pump and the evaluation device is embodied such that the relevant state of the valve can be determined through it on the basis of the recorded sound signal.
4. Diagnostic method for a valve, especially a check valve of a 30 positive displacement pump, with at least one solid-borne sound sensor (20, 21), with a device (22) for evaluation of at least

one recorded solid-borne sound signal and with means (25) for determining the state of a valve, through which it can at least be determined whether the valve (8, 9) is in the open or the closed state, characterized in that a first value of a 5 characteristic value (L1) of a sound signal recorded in the closed state of a valve (8) is determined, that essentially at the same time a second value of a characteristic value (L2) of a sound signal recorded in the open state of the same valve (8) and/or of a valve operated in a comparable environment (9) is 10 determined, and that a signal (31) for displaying a fault is output if the deviation of the first value from the second value exceeds a predetermined threshold value (30).